m/037/088

RECEIVED
JUL 27 2004
DIV OF OIL GAS & MINING

Lisbon Valley Mining Company - SUMMO
Exploration for Year 2004
Drill Holes in Centennial Pit

The holes for 2004 would be deeper than previously drilled for exploration/sampling minerals. There was a possibility of hitting water when drilling. The Moab Field Office (MFO) was unable to confirm that no fresh water would be impacted by the drill holes.

Information regarding provisions for plugging exploratory holes and plugging holes that encounter water were reviewed (State of Utah Administrative Codes, Titles R647 & R655; and BLM Manual for mining exploration). MFO wanted plugging procedures that would ensure protection of the water resources. The MFO Petroleum Engineer, Eric Jones, developed specifications for plugging water zones with cement. A copy of the Conditions of Approval is attached.

SUMMO assigned the following numbers to the drill holes: #4R26-4R34 (drilled by AK Drilling Co.) and #4C1-4C4 (core holes drilled by Godbe Drilling Co.). All of these holes were drilled. With the exception of Hole #4R28, all of the drill holes were plugged. The plugging of Hole #4R28 was postponed until the next drilling session.

As required in the Conditions for Approval, SUMMO notified BLM by telephone of the dates and times for plugging all of the drill holes. In many cases, SUMMO had to make more than one call to BLM prior to initiating plugging procedures. The nature of exploratory drilling in an area with dead zones for cell phones (and BLM radio reception) is not well suited for providing 24 hour advance notification of plugging procedures. At times, the requirement for the 24 hour notification was a bit cumbersome for SUMMO and BLM. After a few holes had been drilled and plugged, BLM requested a single 2-3 hour advance notification (rather than 24 hour notification) when operations were occurring during normal BLM working hours. The modification to the notification allowed for more continuous drilling/plugging operations and reduced the field time required for the BLM inspector.

BLM (Rich McClure) witnessed plugging procedures at the following holes:

#4R26, 6/6/04;
#4C1, 6/7/04;
#4R27, 6/9/04;
#4R29, 6/14/04;
#4C2, 6/16/04;
#4R34, 7/15/04; and
#4C4, 7/16/04.

Observations made during the inspections of plugging procedures were discussed with the MFO Petroleum Engineer to verify specifications were properly implemented.

The drill holes were plugged by the drilling contractors, and SUMMO personnel were present during plugging operations. SUMMO personnel/contractors cemented the upper 3 feet of the holes and installed aluminum identification disks approximately 1 inch diameter. The disks were stamped with "SUMMO" and the Hole number.

Specific notes on the plugging operations are attached. The BLM inspections verified that the Conditions of Approval for the hole plugging were properly implemented.

RMcClure 7/21/04

Attached
- Conditions of Approval (1p)
- BLM Inspection Reports (9pp)

cc: Mr. Paul Baker, Division of Oil, Gas, Mining

Summo Mining
2004 Drilling Project
Centennial Pit
San Juan County, Utah

CONDITIONS OF APPROVAL

1. In consideration of the depth of proposed drilling and the presence of an aquifer, all holes must be plugged with cement in accordance with BLM Manual Handbook H-3042-1, Solid Mineral Reclamation, Chapter 5.

2. Cement for plugging shall be Class A, B, C or G, mixed to standard slurry density. The cement may contain up to ¼ lb/sack cellophane and/or up to 2% CaCl2. If the operator would like to use cement additives in addition to those listed here, contact Eric Jones of the BLM Moab Field Office at 435-259-2117 for review of your proposal.

3. Cement must be pumped into place through the drill stem from the bottom of the hole up to at least 100 feet above the top of the aquifer. After allowing for compressive strength development, all plugs shall be "tagged" with the weight of the drill string to ensure proper placement. Cement may be circulated to surface to avoid the time delay of "tagging" a plug. If a plug is found to have migrated from its required location, additional cement shall be pumped and the plug shall be re-tagged.

4. After the cement aquifer plug is set and tagged to verify its proper depth, the hole shall be backfilled. Backfill material may be drill cuttings, granular bentonite, bentonite drilling mud or a combination.

5. Each drill hole must have a cement plug of at least three-feet-thick placed at the surface.

6. A brass or aluminum marker, identifying the drill hole and the company name, shall be secured into the cement surface plug.

7. At least 24 hours prior to commencing plugging operations for each drill hole, notify one of the following of the time plugging operations are anticipated to begin:

Eric Jones	435-259-2117
Rich McClure	435-259-2127
Jack Johnson	435-259-2129

June 6, 2004
Lisbon Valley - SUMMO
Hole Plugging - Centennial Pit
Hole #4R26 (on a bench about 1/2 the way up the eastern slope of the pit)

Drilling Company: AK Drilling, Butte, MT 59701 (406) 782-8506

Drill mounted on a buggy type vehicle; ~ 40,000 pound GVW (like a John Deere log skidder), 4 big buggy tires, articulated in the middle; hydraulic system could move drill to set up directly from the back, off-set on either side, or fold drill over the back of the buggy for transportation; capable of air or rotary drilling. No pits were constructed for the AK drilling operations.

Chris was the driller, plus two helpers. Crew had hardhats, hard-toed boots, and eye protection.

1. Chris had seen the specs provided to SUMMO by BLM.

2. The drill holes will be plugged from bottom to top.

3. Drill hole diameter ~4½-5 inches, 600 feet deep.

4. Chris estimated ~3.1 cubic yards of cement and ordered 3½ cubic yards from LeGrande Johnson.

5. Driver for LeGrande Johnson confirmed 3½ cubic yards delivered (Portland cement, Type II).

6. Cement was pumped through drill pipe in 5 batches.

7. Each batch was transferred from LeGrande Johnson delivery truck to a metal trough.

8. Trough was about 2½ feet tall, 2½ feet by 4½ feet, and trough was plumbed with an outlet at the bottom end (outlet with hose to pump and hose from pump to cementing head).

9. Estimate ~ ⅔ cubic yard cement in each batch.

10. Approximately 450 feet of pipe was in the hole for the first batch of cement.

11. First batch of cement pumped through the pipe. Ran some water into trough to rinse trough and to pump through the pipe to clean cement off pipe (estimate ~¼ - ⅓ tank of water).

12. Released pressure at well head (small valve at top of cementing head).

13. Pulled 11 rods (joints of pipe), each rod 10 feet long and approximately 4 inches diameter.

14. Second batch of cement pumped through pipe and water added to rinse trough and pump through pipe.

15. Pulled 10 rods.

16. Third batch of cement pumped and H2O pumped for rinse.

17. Pulled 15 rods; about got stuck when pulling pipe, driller said cement had come up and was sticking to outside of pipe.

18. Fourth batch of cement pumped and pumped H2O rinse.

19. Pulled 6 rods.

20. Fifth and final batch of cement (delivery truck dry), pumped into pipe – no return of cement observed at surface of the hole.

21. When running water to rinse trough and pipe, water came to surface and overflowed from drill hole (estimate 10-20 gallons).

22. Pulled last 3 rods. (Driller blew air through pipe after tripping to clean cement/water from last 5-6 rods of pipe).

23. Approximately 3 hour process for cementing.

24. After rig moved, checked drill hole; could not see water/cement in well bore.

25. On 6/7/04, checked drill hole with SUMMO (Martin), tagged top of cement with Martin's tape. Top of cement about 55 feet below surface, and ~10 feet water on top of cement.

BLM witnessed entire plugging process on 6/6/04.

Verified 45 rods removed from drill hole during cementing operations.

If average outside diameter of hole was 5 inches:

0.1364 cubic feet/foot X 600 feet = 81.84 cubic feet or ~3 cubic yards of cement

Took sample of 1st batch of cement, based on conversation with LeGrande Johnson driver, believe it was 22 sacks/yd cement mix. Checked sample couple of days later and it set-up like cement.

June 7, 2004
Lisbon Valley - SUMMO
Centennial Pit - Plugging Hole #4C1
(Hole #4C1 was on top edge of the eastern slope of the pit)

Drilling Company: Godbe Drilling, LLC; Montrose, CO

Conventional truck-mounted drill rig, rotary drilling, taking core samples.
Pit constructed with backhoe next to rig, and water truck onsite.
Drill pipe ~2⅞ inches diameter.
Drilled ~1000 feet deep, encountered no water during drilling; driller hauled and added water to the drill hole each day.

Dan was the driller, plus 2 helpers. Crew had hardhats, hard-toed boots, eye and ear protection. All Godbe vehicles and trailers had chock-blocks set against at least one wheel to prevent rolling.

Dan had seen BLM plugging specs.

1. Cement was being mixed onsite.

2. Mixed 20 bags cement in a circular trough. Rubbermaid Trough ~300 gallons, ~6 feet diameter by 2½ feet tall. Estimated volume of 1st batch at ~1 cubic yard.

3. At beginning of cementing operations, end of the drill pipe was ~5 feet off bottom of hole.

4. First batch of cement pumped through drill pipe.

5. Some water forced out of drill hole when pumping cement.

6. Pumped 30 gallons of water through the drill pipe to clean cement from equipment and pipe.

7. Pulled all rods (10 feet long pipe joints).

8. Replaced slips to hold casing, and pulled casing up a few feet.

9. Mixed second (and last) batch of cement: filled trough ~½ full of water, added 19 sacks of cement, estimated volume of 2nd batch at ~1 cubic yard.

10. Pumped cement through casing while rotating casing, end of casing about 140 feet deep.

11. When down to last few inches of cement, casing stuck (stopped rotating).

12. Driller worked casing loose, released some pressure and water/cement sprayed out of hole; finished pumping cement.

13. Ran 30 gallons of water through the casing.

14. Pulled the casing; after pulling 20-30 feet of casing, all remaining casing had cement on the outside of the pipe.

15. No water or cement overflowed at the drill hole.

16. Driller estimated top of cement at 30 feet below surface.

17. Cement used: Portland Type I/II; Quikrete, 92.6 pounds per sack.

18. Driller's specifications were for 30 some-odd sacks of cement (based on bit size for NX hole).

19. If drill hole was 3⅛ inches diameter and 1000 feet deep:

    0.0533 cubic feet/foot X 1000 feet = 53.3 cubic feet or 1.97 cubic yards of cement.

BLM witnessed entire plugging process on 6/7/04.

On 6/7/04, took sample of the 19 sacks per yard cement mix. Sample checked a couple days later and verified it set up.

June 9, 2004
Lisbon Valley - SUMMO
Centennial Pit - Hole Plugging
Hole #4R27
(Hole #4R27 was north of Hole #4R26, on eastern slope of Centennial Pit)

AK Drilling Rig

1. Drill hole ~5 inches in diameter, 720 feet deep.

2. End of pipe at ~500 feet for pumping 1st batch of cement.

3. Cement delivered by LeGrande Johnson, checked invoice, confirmed:
   4 yards, with 84 bags of cement (21 bags per yard).

4. BLM volume estimate: 5 inch hole

   0.1364 cubic feet/foot X 750 feet = 102.3 cubic feet or 3.8 cubic yards of cement.

5. Batching cement in AK's metal trough (same trough as on 6/6/04; estimate ~⅔ yard per batch).

6. Pumped first batch and water rinse.

7. Pulled 15 rods.

8. Pumped second batch and water rinse.

9. Pulled another 15 rods.

10. Pumped third batch, started water rinse, flow stopped.

11. Pulled 4 rods to get out of cement, finished water rinse, and pulled 11 more rods.

12. Pumped fourth batch.

13. Started pumping fifth batch of cement, got cement overflow at drill hole; released pressure at cementing head and blew cement all over, pulled rods.

14. Drill hole was full of cement and about ⅔ yard cement left over. Dumped remaining cement next to drill hole.

BLM witnessed entire plugging operation on 6/9/04.

Checked hole a couple days later and top of cement had dropped a few feet.

June 14, 2004
Lisbon Valley - SUMMO
Centennial Pit
Hole Plugging - Hole #4R29
(Hole #4R29 was on eastern slope of pit, on bench ~ 1/4 way up from the bottom)

AK Drilling

Drill hole was ~700 feet deep;
End of Rods ~200 feet off bottom of hole for pumping 1st batch of cement.

Cement delivered by LeGrande Johnson.
Verified run ticket and cement delivered: 4 cubic yards, with 84 bags of cement.
Cement transferred into AK's metal trough for pumping batches of cement (same trough as on 6/6/04)

1. Pumped first batch of cement and water rinse (¼ - ⅓ tank of water).

2. Pulled 10 rods.

3. Pumped second batch of cement and water rinse.

4. Pulled 20 rods.

5. Pumped third batch of cement and water rinse.

6. Pulled 10 rods.

7. Pumped fourth batch of cement and water rinse.

8. Pulled 15 rods (all remaining rods).

9. Estimated ~100-150 feet of open hole left. Did not pump 5th batch of cement through pipe; Pumped fifth batch cement with hose - tried to run it in at ~1 inch stream and ran almost whole batch of cement into drill hole. (Process eliminated problems from 6/9/04, of blowing cement all over.)

10. Cement dropped a few feet.

BLM witnessed entire plugging procedure on 6/14/04; approximately 1 hour travel each way and 2½ hour plugging process.

This was the third hole drilled by AK Drilling; averaging ~½ cubic yard of cement per 100 feet of hole.

June 16, 2004
Lisbon Valley - SUMMO
Centennial Pit - Hole Plugging
Hole #4C2
(Hole #4C2 was north of Hole #4C1, on eastern slope of Centennial Pit)

Godbe Drilling Rig

1. Drill hole ~702 feet deep.

2. Driller had pulled casing out of the hole. End of pipe was ~2 feet off bottom of the hole prior to cementing.

3. Measured diameter of N rods, < 3 inch; core-bit diameter was a little over 3 inches.

4. BLM volume estimate: 3 inch hole

   0.0491 cubic feet/foot X 700 feet = 34.37 cubic feet or 1.27 cubic yards of cement.

5. Mixing cement onsite in 300 gallon Rubbermaid Trough (same trough as on 6/7/04); first batch was ~10 inches of water and 15 sacks of Portland cement Type I/II, Quikrete (estimated ~⅔ yard batch).

6. Pumped first batch, rotating pipe while pumping; pumped water rinse (~30 gallons).

7. Pulled most of the rods.

8. Second batch of cement was ~9 inches water and 15 sacks of cement (estimated ~⅔ yard batch).

9. Pumped a little more than ½ the cement.

10. Pulled the last 8 rods.

11. Pumped the remainder of the cement into the drill hole with a hose, running ~1 inch stream of cement.

12. Cement ran out the surface of the drill hole, and the excess cement ran into the pit.

BLM witnessed entire plugging operation on 6/16/04.

July 15, 2004
Lisbon Valley - SUMMO
Centennial Pit
Hole Plugging - Hole #4R34
(Hole #4R34 was on top of the eastern edge of pit)

AK Drilling

Drill hole was ~1000 feet deep;
End of Rods ~250 feet off bottom of hole for pumping 1st batch of cement.

Cement delivered by LeGrande Johnson; verified run ticket and cement delivered: 4.5cubic yards, with 85.5 bags of cement. Cement transferred into AK's metal trough for pumping batches of cement (same trough as on 6/6/04)

1. Filled metal trough to brim, pumped first batch of cement and water rinse.

2. Pulled 20 rods.

3. Pumped second batch of cement and water rinse.

4. Pulled 20 rods.

5. When pumping third batch of cement; had pump problems. Driller found some rocks in hose and inside pump, got pump running. Finished pumping cement, but the pump was not operating properly (running slow, not much pressure).

6. Pulled all remaining rods.

7. Pump needed repairs and unable to pump cement. Verified drill hole log; only water encountered during drilling was at ~610 feet, volume estimated at 1-2 gallons. Based on volumes of cement pumped and cement found on last 12-15 rods pulled, estimated that 700 feet of the hole was cemented.

8. Tried to pour cement from the truck spout into the drill hole, but cement was setting up and too dry to flow, didn't get much into drill hole, and had to give up.

9. Cement was setting up in the delivery truck, and had to dump remainder of the cement on the ground. Estimate ⅔ -1 yard of cement wasted.

10. Estimated ~300 feet of open hole remaining.

11. On 7/16/04, after discussing situation with Moab Petroleum Engineer; bentonite chips were poured into the remaining portion of the open hole.

July 16, 2004
Lisbon Valley - SUMMO
Centennial Pit - Hole Plugging
Hole #4C4
(Hole #4C4 was in the bottom of Centennial Pit)

Godbe Drilling Rig

1. Drill hole ~595 feet deep.

2. No water encountered while drilling.

3. End of pipe was a few feet off bottom of the hole prior to cementing.

4. Mixing cement onsite in 300 gallon Rubbermaid Trough (same trough as on 6/7/04).

5. First batch of cement mixed and pumped.

6. Pulled most of the rods.

7. Pump problems, driller cleaned insides of the pump.

8. Second batch of cement mixed and started pumping; only pumped a little more than ½ the cement, and cement flowed-out at surface of the hole.

9. Pulled the last 10 rods.

10. Pumped more cement into the drill hole with a hose, running ~1 inch stream of cement. After the drill hole was full, the Rubbermaid trough contained ~8 inches of cement (estimated ~ ¼ yard of the cement).

11. Each of the two batches of cement contained 15 bags of Portland cement, type I/II, 92.6 pounds per bag.

BLM witnessed entire plugging operation on 7/16/04.